

SPEECH RECOGNITION DEVICE

Background of the invention

Field of the invention

The present invention relates to the field of speech
5 recognition enabling the automation of services through remote
telecommunications means, as for example, automated directory dialling
services. Particularly, the present invention relates to implementations in
which the speech recognition is supported by an unobtrusive operator
intervention.

10 Description of the prior art

Automatic speech recognition (ASR) integrates with
telecommunication systems to deliver automated services. These
systems implement human-machine dialogs which comprise successive
verbal interaction between the system and the user. Such dialog systems
15 are responsive to spoken commands that are usually defined in a
grammar or word spotting list, from which models are built such, for
example, as statistical hidden Markov models (HMM), well known in the
art. These models are often built up from smaller models such as sub-
word phoneme models. When the user calls the system and utters a
20 phrase, the ASR system computes one or more recognition hypotheses
by scoring command models against the speech input. Each hypothesis
is defined by a recognition string representing the transcription of the
uttered phrase and a confidence score indicating how much the
recognition process is confident about the recognised string. In
25 conventional systems, the confidence score is usually compared to a
rejection threshold value T. Typically, if the confidence score is higher
than the rejection threshold value, then the hypothesis is accepted by the
system that performs an operation accordingly to the recognised string. If
the confidence score is lower than the rejection threshold T, then the
30 hypothesis is rejected by the system that may, for example, prompt the
user to utter again its input. In-grammar user inputs should have